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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/460,891	12/14/1999	VICTOR KOREN	1098/OF805	3082

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DARBY & DARBY PC
805 THIRD AVENUE
NEW YORK, NY 10022

EXAMINER

TRAN, CON P

ART UNIT	PAPER NUMBER
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2644

DATE MAILED: 08/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/460,891

Applicant(s)

KOREN, VICTOR

Examiner

Con P. Tran

Art Unit

2644

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 June 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 9-11 is/are allowed.
- 6) ☒ Claim(s) 1-8, 12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on June 01, 2004 has been entered.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claims 1-8, and 12** are rejected under 35 U.S.C. 103(a) as being unpatentable over Blon et al. U.S. Patent 6,542,604 (hereinafter, "Blon").

Regarding **claim 1**, Blon et al. teaches a method for correcting for an echo signal component in a telecommunications device (Fig. 1), comprising the steps of inherently sampling a transmitted signal (TTIP) across a sampling resistor (R) to obtain a sampled

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transmit signal; subtracting the sampled transmitted signal (through subtractor AGC) from a line signal (RTIP) to obtain a reconstructed received signal; inherently sampling the transmitted signal across a first RC network echo compensation circuit (RTL2,CTL1) to obtain a first echo compensation signal (for transmission line replica; col. 3, lines 54-58); and subtracting the first echo compensation signal (RTL2,CTL1; together with RRTIP) from the reconstructed received line signal (RTIP) via pins HYB3 and HYB4 (i.e., first circuit node); to produce a first compensated received signal (in AGC) by providing the first echo compensation signal (RTL2,CTL1; together with RRTIP) and the reconstructed received signal to a first circuit (AGC that function as a subtractor; col. 3, lines 31-32); thereby compensating the reconstructed received signal (col. 3, lines 18-67).

However, Blon does not explicitly disclose combining the first echo compensation signal and the reconstructed received signal at a first circuit junction point common to at least two circuit branches.

Applicant provide reference of Kirchhoff's current law in which a subtraction is performed at a junction in a circuit.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the subtraction at a junction in a circuit as provided by Applicant to subtractor AGC of Blon for purpose of subtracting echo compensation signal from the reconstructed received line signal in an economical way.

Regarding **claim 2**, Blon et al. further teaches the method of claim 1, further comprising steps of inherently sampling, sampling the transmitted signal across a second RC network echo compensation circuit (RW1, RW1, RTL2, CBT, YBT, LBT) to obtain a second echo compensation signal (for transmission line replica; col. 3, lines 54-58); and subtracting the second echo compensation signal (RW1, RW1, RTL2, CBT, YBT, LBT; together with RTRING) from the first compensated received signal (in AGC) to produce a second compensated signal (for transmission line replica; col. 3, lines 54-58); by providing the second echo compensation signal (RTL2, CTL2; together with RTRING) and the first compensated received signal (in AGC) via pins HYB3 and HYB4 to the first circuit node; thereby compensating the reconstructed received signal (col. 3, lines 18-67).

Regarding **claim 3**, Claim 3 is claim 1 when the power supply is inverted. Claim 3 is interpreted and thus rejected for the reasons set forth above in the rejection of claim 1.

Regarding **claim 4**, Claim 4 is claim 2 when the power supply is inverted. Claim 4 is interpreted and thus rejected for the reasons set forth above in the rejection of claim 2.

Regarding **claim 5**, Blon et al. teaches an apparatus for compensating for echo signal in a telecommunications device (receiver/transmitter chip RTC; Fig. 1) comprising:

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a transmitter having two outputs (TTIP, TRING; Fig. 1); a receiver having an input (RTIP); a line transformer (T) coupled to the transmitter output (TTIP) and the receiver input (RTIP); and an echo compensation circuit (RTL2,CTL1) including a first circuit branch (RTTIP) coupled to the transmitter first output (TTIP) and the receiver input (RTIP via AGC) and a second circuit branch (RTRING) coupled to the transmitter output (TRING) and the receiver input (RRING via AGC; see Fig. 1; col. 3, lines 18-67).

However, Blon does not explicitly disclose input at junction point common to at least two circuit branches of a receiver; and the receiver input such that a reconstructed received signal and an echo compensation signal are combined and coupled at the receiver input junction point common to at least two circuit branches, thereby compensating for the echo signal in a telecommunication device.

Applicant provides reference to Kirchhoff's current law in which a subtraction is performed at a junction in a circuit by combining signals (having different signs).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the combination of signals at a junction in a circuit as provided by Applicant to subtractor AGC of Blon for purpose of subtracting echo compensation signal from the reconstructed received line signal in an economical way (by combining signals having different signs).

Regarding **claim 6**, Blon et al. teaches an apparatus according to claim 5, wherein:

the first circuit branch further comprises a first resistor (RTL2) and a first capacitor (CTL1) connected in series; and the second circuit branch further comprises a second resistor (RW1) and a second capacitor (CBT) connected in series.

Regarding **claims 7 and 8**, these claims merely reflect the apparatus to the method claim of claim 3 and 4 and are therefore rejected for the same reasons.

Regarding **claim 12**, Blon et al. teaches method of claim 1, wherein the transmit signal (TTIP) and the inverted transmit signal (TRING) are complimentary transmission signal outputs from a differential transmitter pair (line driver LD, see Figure 1; col. 3, lines 33-42).

Allowable Subject Matter

4. **Claim 9** is allowed.

The following is an examiner's statement of reasons for allowance:

Regarding independent **claim 9**, the cited prior arts teach a device for echo attenuation in a digital transmission system using an impedance replica of a transmission path, comprising an impedance replica of a transmission path, the impedance replica including a terminating resistance replica, a transformer replica connected to the terminating resistance replica, and a transmission line replica connected to the transformer replica. The cited prior arts fail to disclose or fairly

suggest the specific combination of structural and functional limitations as the claimed invention.

Claims 10-11 are allowable by virtue of their dependency on claim 9.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Response to Arguments

5. Applicant's arguments with respect to claims 1-8, and 12 have been considered but are moot in view of the new ground of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Con P. Tran, whose telephone number is (703) 305-2341. The examiner can normally be reached on M - F (8:30 AM - 5:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Forester W. Isen can be reached on (703) 305-4386. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9314 for regular communications and (703) 872-9314 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Customer Service Office at telephone number (703) 306-0377.

cpt *CPJ*
August 21, 2004


XU MEI
PRIMARY EXAMINER